Testimony

of

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of the

Committee on Energy and Commerce

House of Representatives

on

"FDA's Foreign Inspection Program: Weaknesses Place Americans at Risk"

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Mr. Chairman and Members of the Subcommittee, I am Gail H. Cassell, Vice President for Scientific Affairs and a Distinguished Research Scholar for Infectious Diseases of Eli Lilly and Company. I am also Professor and Chairman Emeritus of the Department of Microbiology of the University of Alabama Schools of Medicine and Dentistry. I am a member of the Institute of Medicine of the National Academy of Sciences and am currently serving a second term on the governing board of the IOM. Of relevance to my testimony today, I have previously been a member of the Advisory Committees of the Directors of both the Centers for Disease Control and the National Institutes of Health (NIH). In 1994-95, I also co-chaired the Congressionally mandated review of the NIH intramural program. I appear before you today as a member of the FDA Science Board, Advisory Committee to the FDA Commissioner. I served as Chair of the Subcommittee on Science and Technology of the Science Board, which authored the report "FDA Science and Mission at Risk".

Background

In December 2006, the Commissioner charged the Science Board with establishing a subcommittee to assess whether FDA's current science and technology can support the agency's statutory mandate to protect the nation's food and drug supply. The subcommittee was comprised of three Science Board members and 30 other experts. The subcommittee formally presented its report to the Science Board and FDA on December 3, 2007. The report was unanimously endorsed by each of the 33 members of the Subcommittee and the full Science Board. The Science Board accepted the report as final and dissolved the subcommittee. The record of the proceedings of that meeting will

show that due to the seriousness of the deficiencies found and the urgency of the situation, the Science Board was adamant that the report be broadly disseminated among the public and policy makers, including posting it in the Federal Register.

The subcommittee review was unique in many respects. First, it is only the second time in over a century that the agency has been reviewed by an external committee reviewing the agency as a whole entity. Second, the committee was composed of leaders, not from a single sector, but from industry, academia, and other government agencies. The expertise and level of accomplishments of the members are almost unprecedented in a single committee, especially considering their breadth and knowledge in regulatory science and understanding of the mission of the agency.

The subcommittee included expertise ranging from a Nobel laureate in pharmacology, 14 members of the National Academy of sciences (including two engineers), a renowned economist and specialist in workforce issues, a leader in health care policy and technology assessment, a former CEO of a large pharmaceutical company, a former Assistant Secretary for Health and Human Services who also headed global regulatory affairs within a large company for over 20 years, a former Chief Counsel for the FDA, and the first under Secretary for Food Safety at the U.S. Department of Agriculture overseeing the Food Safety and Inspection Service and coordinating U.S. government food safety policy.

For over a year, this group of experts worked intensively conducting their review. It became rapidly apparent that the FDA suffers from serious scientific deficiencies and is not positioned to meet current or emerging regulatory responsibilities. It is agency wide, i.e. not limited to a single program or Center. Since every regulatory decision must be based upon the best available scientific evidence in order to protect the public's health, we concluded that American lives are at risk and that there is an urgent need to address the deficiencies. The level of concern by all members of the Subcommittee and the Science Board members was, and remains, high…and thus the intensity of their commitment to this review and their insistence that the findings be broadly communicated.

What we found is quite simply, demands of FDA have soared over the past two decades. Resources have not! Furthermore, we found that the Agency has not adapted in order to maximize existing resources by capitalizing upon the scientific resources in the academic community and other government agencies.

The specific findings of our review were the subject of a hearing of this Oversight Committee held on January 29, 2008 "Science and Mission at Risk: FDA's Self-Assessment." Thus I will not discuss all of the findings in detail today but rather I would like to focus upon those aspects of our review that are most relevant to the topic of today's hearing on foreign inspections: 1) Growing Disparity Between Responsibilities and Resources; 2) Gaps in Scientific Capacity and Capability; 3) Information Technology; and 4) Organizational Structure.

Growing Disparity between FDA Responsibilities and Resources

There is no more quintessential governmental responsibility than the protection of basic commodities of American life such as our foods and drugs. The Science Board report emphasizes that the need for an effective FDA is greater than ever before: FDA regulates 80% of the nation's food supply; plays a critical role in assuring the safety of therapeutics such as drugs, vaccines, and medical devices; regulates a vast number of other consumer products, ranging from televisions and cellular telephones to cosmetics, blood, and pet food; and has historically been the agency to which governments around the world look to make determinations about the safety of new products. Moreover, the FDA is increasingly important to the nation's economic health, as it regulates a quarter of consumer expenditures, and the industries it regulates are innovative leaders in science and technology and among the few American industries with a positive trade balance with other nations. Further, FDA will be a critical component in combating emerging threats such as intentional contamination of the food supply and the threat of chemical, biological and radiological attack—as well as naturally occurring threats such as SARS, West Nile virus, and avian influenza.

The Science Board concluded that FDA is being slowly "hollowed out" by a progression of budget cuts and inattention to the agency's needs. That deterioration, in turn, means that not only can the agency not fulfill its public health mission, but that the safety of our citizens and the well being of our economy are being undermined. Further,

as the agency falls farther and farther behind, the public is increasingly losing confidence in the government's ability to protect them.

The demands upon the FDA have soared due to the extraordinary advance of scientific discoveries, the complexity of the new products and claims submitted to FDA for approval, the emergence of heretofore unknown health threats, and the globalization of the industries that FDA regulates. The metrics alone are daunting, 125 new statutes added to FDA's workload by Congress in the past two decades, most without resources to implement them; 375,000 establishments making FDA-regulated products; a tripling in a decade of R & D in drugs and medical devices; an exponential increase in drug adverse reaction reports; and the emergence in recent years of extraordinary new health threats, such as, *E. coli* 0157H:7, AIDS, mad cow disease, and more. Perhaps most emblematic of this trend is the ten fold increase in the past decade of imports from other countries. Today, 15% of our food supply is imported from more than 100 nations, along with over half of our drugs, yet FDA has been given virtually no new authorities nor resources to address a dramatic change in the sourcing (and associated risk) from products made overseas, often in developing countries with little or no tradition of scientific rigor.

Gaps in Scientific Capacity and Expertise

FDA's resources have not only not kept pace with its responsibilities, many critical agency programs have sustained actual cuts. For example, FDA's food headquarters program has lost 20% of its scientists in just the past three years, despite an upswing in

outbreaks of foodborne disease in the United States and a steady increase in contaminated seafood, produce and other foods being imported from foreign countries. Similarly, FDA has lost several hundred inspectors due to budget cuts since 2003, leaving the agency not only incapable of inspecting domestic manufacturers but also ensuring that most of the nation's ports have no FDA inspectors. Although one FDA function, new drug and device review, has received additional funding from industry-paid user fees, the agency as a whole has lost 1000 people over the past decade. This loss in scientific capacity has resulted in loss of personnel to perform inspections associated with marketed products but equally important it has resulted in significant and critical gaps in scientific expertise.

Innovations and advancements in science are outstripping FDA's capacity to understand and regulate them, threatening not only the safe introduction of new technologies but also American leadership in pharmaceuticals, vaccines, biotechnology, and medical devices. The United States is on the cusp of another "revolution" in therapeutics that holds great promise for effective treatments of cancer, Alzheimer's, Parkinson's, and other previously incurable conditions. Breakthroughs in human, animal, and microbial genomics, molecular biology, nanotechnology, food processing technology, computational mathematics, *in vivo* imaging and many more are likely to change the face of medicine and food production, yet FDA has not been given the capacity to prepare for these breakthroughs. Tens of billions of dollars are being spent by both the public and private sector on the development of such products, yet FDA has been denied the relatively minor funding necessary to ensure their rapid and safe entry into the market. At a time in which U.S. competitiveness in science, medicine, and food

production are under increasing strain from overseas, a weak and underfunded FDA will be a brake on the very technologies that the United States is relying upon for its medical and technological future.

Our Science Board Subcommittee considered the funding issues to be more acute for the Center for Food Safety and Applied Nutrition (CFSAN) than for other FDA programs. FDA's food safety program is characterized as one steadily dropping in staffing, and in funding for essential functions. Budget cuts for food safety have brought the agency from doing 35,000 domestic food inspections in 1973 to fewer than 8000 in 2007 (meaning FDA inspects most facilities on average only every ten years). The foreign inspection rate is even worse, as the agency may manage to inspect a dozen foreign food manufacturers in 2008, despite the thousands of overseas producers sending food to our shores. Moreover, as FDA's leadership in food safety erodes, other countries are presenting themselves as the appropriate model for food safety standard setting, even though such standards can be unscientific and disguised trade barriers, to the detriment of principles of sound science and to market access for American food exports. A recent GAO report indicates that less than 7% of foreign drug manufacturing sites are inspected annually be FDA.

The Science Board Subcommittee viewed the current scientific needs of FDA to be extensive and diverse in terms of critical expertise, infrastructure, and knowledge gaps across FDA. Again they were particularly critical in CFSAN. The food industry is rapidly changing both in terms of its global nature and the sophistication of the

technologies used for production, processing, and marketing. In addition, the hazards related to food are changing and evolving in concert with changing food technologies and food production locales. The food regulatory program lacks sufficient high-quality applied field and laboratory research data to understand the mechanisms of contamination and how to mitigate or eradicate the many pathogens involved in the food production process. Additionally, CFSAN scientists are limited in their knowledge of food production, whether in the agricultural or aquacultural aspects of food production, especially in foreign production arenas. The capability and capacity of FDA to detect food-borne viruses and parasites have not kept pace with the emergence of this public health threat from international sources. It is essential that FDA have the capability to rapidly detect food-borne pathogens. Currently they are limited in scope and have lengthy time requirements. Quick high throughput technologies are needed. This is a serious impediment to the US food safety program. Likewise, quick high throughput technologies are needed for detecting chemical contamination in both food and drugs. While the FDA was able to develop an assay for screening of heparin during the recent adverse reactions, the assay needs to be adapted to high throughput with improved sensitivity and adoption for field use.

Information Technology Systems

FDA's information technology systems are woefully outdated and inadequate, posing a concrete threat to the agency's public health mission. The report's authors were extremely disturbed by the state of FDA's IT infrastructure. We found a situation

problematic at best, at worst dangerous. Many of FDA's systems are far beyond their expected life span, and systems fail frequently (even email systems are unstable). Emergency back-up systems are not in place. I heard recently that the newly established program related to adverse event reporting was lost due to failure of a back-up system. This has already resulted in a six week delay in implementation and it remains inoperable. Reports of product dangers are not rapidly compared and analyzed, inspectors' reports are still laboriously hand written, and the system for managing imported products cannot communicate with Customs and other government systems. These inadequacies do not only cause inefficiencies and waste, but more importantly mean that dangers lurking in information coming to the FDA are simply missed—such as drug adverse reactions that are duly reported but not flagged for attention due to incapacities in information management. Data bases and data mining capabilities for appropriate tracking of inspections sites has proved to be a major challenge with existing technology and expertise. Inaccurate data bases and data bases not easily mined continue to hamper foreign inspections for drug manufacturing even though some of the problems were identified by GAO over a decade ago.

Conclusion

FDA can no longer fulfill its mission without substantial and sustained additional appropriations. The current situation has developed over many years, the question is not why or how we got here but rather how do we strengthen FDA going forward? Our subcommittee strongly believes our report provides the required blueprint.

The report is unique in yet another important way. It not only provides an assessment by a rigorous review of the Agency by a diverse team of experts from the public and private sectors, but it also includes a simultaneous assessment by leaders of the FDA (as contained in Appendices L-M). Our Subcommittee requested staff to not only identify science and technology gaps but to link each directly to their specific regulatory mission. This comprehensive external/internal analysis--done at the same point in time for an entire Agency--is indeed rare.

We recognize that adequate resources—human and financial—alone will not be sufficient to repair the deteriorating state of science at FDA, which is why our committee also recommended significant restructuring. While our report focused upon the FDA organizational structure related most to the scientific infrastructure, it might well be that in light of continuing issues related to globalization that we should be asking "What FDA organizational structure is needed to protect the public's health in the 21st century setting of globalization with rapidly expanding importation of foreign drugs, vaccines, biologics, and food?" While our Subcommittee recommended that the Science Board conduct an extensive review of the Office of Regulatory Affairs and the National Center for Toxicological Research, Congress may want to consider requesting IOM to perform a more in depth study to evaluate the overall Agency structure given the concerns also raised regarding structure and drug safety. Regardless of the organizational structure, it is clear that without a substantial increase in resources, the Agency will be unable to meet either the mandates of Congress or the expectations of the American public, regardless of management or leadership changes. Our findings are supported by many recent GAO

reports as you will hear today as well as recent reports form the Congressional Research Service and the National Academy of Sciences.

On behalf of our Subcommittee, we thank Chairmen Stupak and Dingell and ranking members Barton and Shimkus for holding this hearing and for your recognition of the seriousness of the deficiencies we have identified and the urgency with which they need to be addressed. The urgency of our advisory is simply predicated upon the fact that we see signs of an increasingly chaotic environment descending upon FDA, and the need to address the deficiencies we identified. Without immediate action, injuries and deaths from an overwhelmed regulatory system are certain, and the costs to our society will be far greater than any dollar figure upon which we all can agree.

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